경영학 석사학위논문

Employees' knowledge management behaviors and peers' reactions in social network context:

How peers' reactions influence employees' creative performance

지식관리 행동에 대한 동료들의 대응이 개인의 팀 위치와 창의성에 미치는 영향

2016 년 8 월

서울대학교 대학원

경영학과 경영학 전공

종의가(Yichia Chung)

Abstract

Employees' knowledge management behaviors and peers' reactions in social network context:

How peers' reactions influence employees' creative performance

Yichia Chung

Department of Business Administration

The Graduate School

Seoul National University

Utilizing social exchange and network theories, this study focuses mainly on the dynamics of employees' mutual knowledge management relationship, testing how an individual' trait differences and social value orientation affect their decision either to share or hide knowledge. This study further investigates how employees' interpersonal relationship affects their personal position in a team context and their creative performance. The moderation effects of the team level's SVO are also included in the present study.

Research hypotheses were investigated with team unit data collected in

Taiwanese and Korean organizations, including 253 subordinates and 64 team supervisors in 65 teams. The analysis results indicate that individuals with prosocial value orientation share additional knowledge than proselfs. Compared with individual's active knowledge sharing behavior, peers' reciprocal hiding directly affects an employee's creativity. Furthermore, peer's knowledge sharing/hiding toward certain people also has an additional powerful effect on his/her communication position and influence in the team network, which in turn, affects an individual's creative performance. The results show that the interaction between the team's average prosocial value orientation and the individuals' prosocial value orientation significantly triggers other peers' positive reciprocity.

Keywords: Social value orientation, knowledge management behavior, reciprocity, punishment, network position, creativity, team level social value orientation

Student Number: 2013-23802

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. INTRODUCTION

Teams are a common form in the organizational context, and team members constantly collaborate and have the ability to form important decisions because of the many information resources they acquire (Cohen and Bailey, 1997; Ilgen, Hollenbeck, Johnson, and Jundt, 2005). A team is formed by two or more people with different demographics, background, or working experience. In other words, teams may exhibit different levels of diversity in terms of team members' composition. In several previous studies, scholars have examined and emphasized that two perspectives can thoroughly explain team diversity. The first perspective is the similarity attraction perspective. Studies revealed that team members respond positively and cooperate fully with similar fellows rather than dissimilar ones (van Knippenberg et al., 2004). Scholars also illustrated the contrary statement that heterogeneous teams may have more task-relevant information, abilities, and skills to produce different ideas and perspectives toward tasks (van Knippenberg et al., 2004).

As an intangible asset, knowledge can be considered a potential competitive advantage to achieve organization and business success (Cabrera and Cabrera, 2002; Riege, 2007). When members in organizations or teams exchange or share their personal knowledge among one another, they can acquire other creative

versions or ideas from others and consequently have higher performance. Prior studies focusing on information decision-making perspective have tested the three-way relationship among team diversity, knowledge sharing, and creativity. For example, Gilson et al. (2013) found that tenure diversity may positively affect individual's explicit knowledge sharing when the level of knowledge sharing is high, thereby increasing an individual's creativity. A study tested the heterogeneity of team members' professionalism, experience, and thinking, and determined that knowledge heterogeneity positively affects team knowledge sharing (Wu, Liao, and Dai, 2015). However, members differ in terms of demographics, tenure, background, and personality traits.

Several studies have noted that the diversity in team members' demographics, tenure, or educational background may benefit their knowledge sharing. However, other studies noted the adverse possibility that teams composed of diverse members could have difficulty understanding each other, thereby failing to share the knowledge and information they own (van Knippenberg and Schippers, 2007). If knowledge is not shared, individuals may then receive less knowledge resources to create something new and novel; consequently, their creativity decreases. When team members display different personality traits, they have dissimilar attitudes, way of thinking, and preferences toward self and collective outcomes. Therefore, I assume that the differences in team members' personality have a negative influence on their interpersonal knowledge sharing dynamics, which gradually causes a

decrease in creativity. This topic has not been discussed and included in prior studies.

In the organizational context, each employee has different preferences toward either self or collective outcome. Explicitly, employees can be divided into the following two types: some employees motivated to automatically help other coworkers and others focus more on personal tasks. Based on this perspective, scholars explained that observing employees' social value orientation (SVO) is the appropriate method to understand how employees are motivated to act in an organization. SVO is defined as pre-existing preferences and refers to a person's individual choices to maximize either self or collective interests (Van Lange, 1999). Prior studies demonstrated that prosocially motivated employees may perform more knowledge-sharing behaviors while exhibiting more knowledge-hiding behaviors when instrumentally driven (Connelly et al., 2012). The SVO of employees may trigger them to exhibit either knowledge-sharing or knowledge-hiding behaviors in different levels. This topic is worth investigating.

Employees can be distinguished into three types according to their SVO, namely, prosocial, individualist, and competitor (Handgraaf, Van Dijk, and De Cremer, 2003). Employees with prosocial value orientation (prosocials) are more prosocially motivated and have additional concern for others, but not at the expense of self-interest (De Dreu, 2006). On the contrary, individualists and

competitors (proselfs) care more regarding the profits of self but are occasionally driven by extrinsic rewards and benefits to engage in helpful or collaborative behaviors (Boone et al., 2010). As mentioned in knowledge-sharing literature, transferring knowledge to others is a dilemmatic decision (Cabrera and Cabrera, 2002). Therefore, the present study primarily aims to determine how individual members' SVO affects their action to either exchange or hide personal knowledge. Specifically, I assume that prosocially or intrinsically motivated prosocials perform more knowledge sharing because of their collective outcome preference and the enjoyment they experience when helping others (Wasko and Faraj, 2000). By contrast, proselfs exhibit higher intention to hide their knowledge without triggering extrinsic motivators.

Team members are embedded together and frequently interact with one another. Thus, members may mutually respond and reciprocate other peers' behaviors. However, several previous studies have illustrated that the level of social exchange relationship among team members is based on their trust relationship with one another (Blau, 1964; Wasko and Faraj, 2005). When prosocials share their personal knowledge to others, peers may consider prosocial-oriented people as trustworthy. Consequently, peers may reciprocate interpersonally to such people. On the contrary, when proselfs constantly hide their knowledge and information, and thus, peers may label them as selfish and may choose to hide their knowledge to retaliate (Cerne et al., 2014).

Literature on interpersonal knowledge sharing and creativity revealed that interpersonal reciprocity increases individual's creativity, whereas reciprocal knowledge hiding negatively influences creativity (Cerne et al., 2014). However, no study focused on the relationship between members' interpersonal responses toward each other's knowledge management behavior and member's individual creativity through the network perspective. Thus, I aim to verify how the creativity of prosocials and proselfs are influenced by peers' reaction through the network perspective.

Team members are all interwoven into a working network and constantly influence one another. From the social network perspective, peers' positive and negative reciprocity may place prosocials and proselfs conversely into a different network position. The position in a working network means different opportunities to receive related information and resources, which are core components of creativity. When prosocial-oriented individuals share their knowledge to other peers, they may easily receive reciprocal knowledge exchange. Specifically, prosocials can possibly obtain a considerable quantity of information and knowledge and end up placed in the central position of the network (Reinholt, Pedersen, and Foss, 2011). However, when faced with proselfs' knowledge-hiding behavior, peers may also choose to withhold their own information. Consequently, proselfs experience difficulty obtaining any new information or other knowledge resources in the network. Proselfs become isolated or dispelled outside the web of

the network (Wasserman and Faust, 1994). Accordingly, the individuals' position in a network may vary with peers' positive or negative reciprocity, which may influence the individuals' creativity.

I also aim to test the moderating effect of team's average SVO. Team member's average SVO results in the team represent totally different characteristics. For a team composed of more prosocial than proself individuals, the team shares similar other-oriented values and work together to contribute to the collective good, especially for the team's effectiveness (Hu and Liden, 2015; Batson, Ahmad, Powell, and Stocks, 2008). When most of the team members are prosocial-oriented, the team appreciates a prosocial individual's contributions and helping behaviors but relatively emphasizes more on how to achieve the team's collective goals. With the higher priority for team's effectiveness and process, peers may not constantly reciprocate prosocial's knowledge sharing. On the contrary, when a team is composed of more proself- than prosocial-oriented members, the team focuses more on personal tasks and perceives other partners as more concerned with self-interest as the team (Van Lange, 1992). Accordingly, team members do not take revenge for other proself's hiding behavior. Therefore, I propose that the team's average prosocial orientation and team's average proself orientation have moderating effects in attenuating the positive relationship between prosocial's knowledge sharing and reciprocal knowledge sharing and between proself's knowledge hiding and reciprocal knowledge hiding.

In prior literature, scholars have stated that a team's diversity can benefit team members achieve more task-related information and knowledge sharing among members. However, I expect to discover the opposite possibility that team members' personality differences may cause reverse and negative effects on interpersonal knowledge sharing. Apart from testing each of the knowledge sharing's antecedents or consequences, knowledge-sharing discipline must also be examined more comprehensively. Therefore, the present study contributes to knowledge-sharing literature as follows. First, I include knowledge-sharing and knowledge-hiding's antecedents and results in the overall research framework. Second, I aim to verify how team members' different SVOs affect each of the peers' interpersonal reciprocity and revenge. Third, although scholars revealed the positive relationship between knowledge sharing and creativity, I test another possibility that other people's behaviors may also affect individuals' creativity. I specifically combine interpersonal interaction and network perspectives. The influence of peers' interpersonal responses on individuals' network position and its different contributions to their personal creative performance are also examined.

II. THEORETICAL BACKGROUND

1. Social value orientation and knowledge management behaviors

Scholars revealed that individuals exhibit different SVOs. SVO is used as a variable of individual differences and is regarded as a personal preference toward the outcomes either for oneself or for others (van Lange et al., 1997b; Bogaert et al., 2008). In SVO literature, some of the prior studies categorized SVO into three types, namely, prosocial, individualist, and competitor (Handgraaf, Van Dijk, and De Cremer, 2003). Later studies divided SVO into individualist, competitor, cooperator, egalitarian, and altruist (Van Lange, De Cremer, van Dijk, and Van Vugt, 2007). The individualists and competitors display their proself perspective in the following ways: the individualists are motivated to maximize their personal outcomes regardless of others, whereas competitors are more driven to maximize the difference between the outcomes for themselves and others (Van Dijk, De Cremer, and Handgraaf, 2004). Cooperator, egalitarian, and altruistic types of people have higher preferences for others' interests than their own outcomes. The literature grouped individualists and competitors as proselfs and termed other types of people as prosocials.

From the diversity perspective, some scholars have proposed that the heterogeneous team composition enables team members to acquire much

knowledge and different opinions from one another, enabling them to produce multiple solutions (Tsai, 2005). On the contrary, other studies posited that when team members are more homogeneous, they have additional possibility to share information and take risks; consequently, their creativity increases (Jehn, Northcraft, and Neale, 1999). However, no study examined whether the different personalities of members positively or negatively influence their opportunity to obtain and share information with other coworkers. As stated in prior studies, knowledge sharing can be motivated by intrinsic prosocial behavior, extrinsic rewards, or expectations of reciprocity (Kankanhalli and Kwok, 2005; Wasko and Faraj, 2000). In the following sections, I test how prosocials and proselfs are motivated when faced with the dilemmatic choice to share or hide knowledge. Employee's knowledge exchange dynamics are also observed from interpersonal and network perspectives.

1.1 Knowledge management behaviors (KMB)

The literature focused on the importance of knowledge management, such as knowledge creation and knowledge sharing in the organization (Dixon, 2000). Some studies stated that knowledge sharing at the organizational level is a process of transferring wisdom, skills, and technology among different organizational subunits; this process can eventually enhance organizational innovation (Tsai, 2002; Teece, 1998). Other researchers also found the positive influence of organizational

knowledge sharing on knowledge creation, organizational learning, and the achievement of company performance (Choi and Lee, 2001; Bartol and Srivastava, 2002). However, apart from knowledge sharing at the organizational level, individuals also have their own way of managing their knowledge, thereby influencing their personal performance. In contrast with an organization's knowledge management, individuals engage in knowledge-sharing and conduct negative knowledge-hiding behaviors to avoid losing personal competitiveness.

Knowledge sharing refers to the individual behavior of sharing organizationally relevant ideas, information, and suggestions (Bartol and Srivastave, 2002). The process wherein employees share their ideas with one another is also critical for organizations (Wasko and Faraj 2000). Employees exchange important information and ideas with one another through interaction and communication, and the original knowledge of the employees will aggregate and emerge as collective knowledge (Wenger and Snyder, 1999).

Considerable KMB literature has determined the benefits of individuals' knowledge sharing behaviors on the self and organizations' performances. However, these studies revealed the dilemmatic perspective of knowledge sharing as a topic that requires investigation. In knowledge sharing, an individual sharing information or knowledge to others probably incurs some personal loss (Cabrera and Cabrera, 2002). Previous studies aimed to resolve or reduce employees'

negative perception toward the possible extra costs of knowledge-sharing behaviors and found that the methods of offering rewards, establishing collective identity, and enhancing the efficacy of an individual's knowledge contribution increase the efficacy of sharing personal knowledge (Bartol and Srivastave, 2002; Cabrera and Cabrera, 2002).

Knowledge hiding is another KMB and refers to the actions of selfish individuals deliberately withholding or concealing the important information or those requested by others (Steinel et al., 2010). As mentioned earlier, employees constantly consider the possible benefits or costs of knowledge sharing (Kankanhalli et al., 2005). When employees realize that their information withholding can bring them some competitive advantages, they may possibly choose to hide knowledge instead of share them with others (Cumming, Smoll, Smith, and Grossbard, 2007). Withholding important information may be temporarily beneficial for individuals; however, this knowledge hiding behavior has a possibility of destroying the members' interpersonal relationship in the long run, thereby resulting in some negative effects on the organization. In particular, the distrust loop and conflict situation may occur frequently between the knowledge hider and the knowledge seeker (Cerne et al., 2014; Grovier, 1994).

1.2 Prosocial orientation and knowledge sharing

As mentioned earlier, knowledge-sharing behavior is a good public dilemma that may prevent individuals from voluntarily sharing knowledge (Cabrera and Cabrera, 2002). However, prosocials are altruists exhibiting the intention to perform behaviors to benefit others without expecting reciprocity (Bello and Oyekunle, 2014). Prosocials are also more focused on others and highly recognize other's perspective (Grant and Berry, 2011). Scholars also revealed that prosocials value group harmony, exert considerable effort to achieve cooperative goals, and trust others when they reveal their private information to them (Steinel et al., 2010; Steinel and De Dreu, 2004). With the intrinsic motivation of prosocials, I consequently assume that prosocials may exhibit more knowledge-sharing behaviors.

Hypothesis 1a: Prosocial orientation is positively related to knowledge sharing.

1.3 Proself orientation and knowledge hiding

Compared with that of prosocials, proselfs' personal identity becomes salient when they are placed in dilemmatic situations (Cress, 2005). When faced with the dilemmatic question of sharing knowledge, proselfs unilaterally receive others' information and ideas to outperform other peers (Steinel et al., 2010). Instead of losing contribution costs, proselfs can enjoy and benefit from others' contributions (Kimmerle et al., 2011). Therefore, without triggering extrinsic motivation, proselfs

may prioritize their personal interests and needs. Specifically, motivating proselfs to share personal knowledge can be difficult because they would rather withhold or distort information requested by others to stabilize their competitive status in the group (Steinel et al., 2010). Accordingly, I assume that proselfs may perform more knowledge hiding behaviors than knowledge sharing behaviors.

Hypothesis 1b: Proself orientation is positively related to knowledge hiding.

2. Interpersonal knowledge sharing and hiding

Previous research has indicated that employees receiving support and assistance from coworkers and supervisors feel obligated and feel a responsibility to repay (Blau, 1964; Organ et al., 2006). Similarly, De Cremer and Van Lange (2001) stated that prosocials focus more on mutual cooperation and the reciprocal relationship with other members. Hence, employees sharing their personal knowledge expect to obtain reciprocity from others. However, from peers' perspective, they may either provide positive responses for employees' knowledge sharing or react negatively toward individuals' knowledge hiding behavior.

Considerable empirical literature has revealed considerable evidence of employee's mutual knowledge exchange relationship (Blanchard, 2008), but only few studies have discussed the consequences of knowledge hiding behavior (Černe et al., 2014; Connelly and Zweig, 2015). To fill these research gaps, I investigate

interpersonal reactions between members in the following sections. How peers react to prosocials' knowledge sharing and proselfs' knowledge hiding can be determined from the interactive perspective.

2.1 Interpersonal reciprocity: other's knowledge sharing

Knowledge sharers focus most on establishing mutual relationships, in which the employees transfer their knowledge and expect the benefits (Lin, 2007). However, not all peers will react positively to knowledge sharers' behaviors. Peers have more confidence toward the mutual relationship only when trust exists in the exchange relationship (Levin and Cross, 2004). Therefore, the trustworthiness of knowledge givers is an important indicator of peers' reciprocity.

As mentioned earlier, employees with prosocial value orientation have higher intention to share their personal information and knowledge. Peers may also perceive prosocials as good cooperators and trustworthy people who always contribute personal resources without concealment. Peers may also recognize prosocials as in-group members; hence, peers may unconsciously facilitate themselves to perform more positive behaviors, which benefit the group or organization (Mael and Ashforth, 1992). Thus, the strong mutual trust between prosocials and peers reduces peers' uncertainties and increases their willingness to take risks (Mooradian, Renzl, and Matzler, 2006).

Apart from viewing the personality perspective of prosocials, the strength of network ties also explains peers' possible responses toward prosocials' behaviors. According to Perry-Smith (2006), strong ties are related to higher opportunities for interactions, emotional closeness, and reciprocity, unlike with weak ties. In particular, when prosocials share their knowledge and information, they also build communicative access with knowledge seekers in the network context. With frequent interactions, peers may become emotionally attached to the interrelationship and strong ties with prosocials; accordingly, peers' reciprocal behaviors would increase further (Hansen, 1999). Therefore, I assume that when prosocials conduct knowledge sharing behavior, peers are motivated and encouraged to reciprocate their kindness with the same sharing behavior.

Hypothesis 2a: Knowledge sharing is positively related to other's knowledge sharing.

2.2 Interpersonal revenge: other's knowledge hiding

Intentional knowledge withholding behavior of employees is perceived as negative behavior, and knowledge hiders are gradually regarded as distrustful individuals (Vardi and Weitz, 2004). Prior studies have shown that employees frequently react to reciprocate counterproductive behaviors in the work place to release them from feeling bad (Tepper, Mitchell, and Almeda, 2011). This finding indicates the possibility that peers may also reciprocate knowledge hiders' behavior

in a more negative manner. Understanding negative reciprocity of knowledge hiding behavior is important but only Černe et al. (2014) and Connelly and Zweig (2015) have discussed this topic. Similar to the results of the two previous studies, I suppose that peers who discover intentional knowledge hiding behavior of employees may punish these unfair actors for their benefit-harming or benefit-withholding behavior (Kahneman, Knetsch, and Thaler, 1986; Raihani, Thornton, and Bshary, 2012). Furthermore, I presume that knowledge seekers may sometimes take fierce revenge on knowledge-hiding employees, particularly on proself-oriented knowledge hiders.

Revenge is related to equity and retributive justice (Stillwell, Baumeister, and Del Priore, 2008). Proselfs prefer to exploit other parties instead of contributing personal resources (Smeesters et al. 2003). Consequently, when proselfs intentionally hide or conceal information from others, peers may perceive injustice and possible harm from the proselfs, thereby triggering their motivation for revenge (Grovier, 1994; Bordia et al., 2008). Therefore, I hypothesize that peers withhold their knowledge not only to punish proselfs' hiding behavior, but also to distort important information requested by proselfs to either even the score (Stillwell et al., 2008) or restore a sense of self-worth (Bordia et al., 2014).

Hypothesis 2b: Knowledge hiding is positively related to other's knowledge hiding.

3. Network position

Although considerable empirical evidence supports the positive relationship between knowledge sharing and creativity, few studies examined employees' knowledge exchange relationship and creativity from a social network perspective. Among the network communities of firms, some knowledge flows are embedded and each firm in a specific industry is more connected with each other than with outside group members (Sytch and Tatarynowicz, 2014; Knoke, 2009). Similarly, employees in organizations are linked with each other through projects or working teams. Each employee is embedded in a specific work network that connects them all (Gargiulo, Ertug, and Galunic, 2009).

Within the working network, employees frequently interact and exchange task-related knowledge with each other. Therefore, literature continuously focused on testing the process and effects of knowledge exchange between employees in the network context. For example, scholars compared the effects of strong and weak ties on creativity, and found that weak ties can help employees easily access more of either relevant or irrelevant information which benefits people's creativity performance (Hansen, 1999; Baer, 2010). Other studies discovered that employees in central network positions often share and receive knowledge, thereby increasing their creativity (Tsai, 2001).

From the network perspective, I argue that individuals receive more opportunities to acquire useful information and knowledge through mutual knowledge exchange relationship with others. Such relationship then positively affects their creative performance. Therefore, the dynamics of interpersonal interaction with peers may place individuals into different positions in the work network. To determine the relationship and connection between knowledge exchange and creativity of individuals, it is necessary to frame the research model with social exchange and network perspective. In other words, the effects of peers' positive or negative reciprocal reactions toward individuals' KMBs and the individuals' positions are examined. Positions refer to the reachable access to the knowledge flows in the network.

3.1 Interpersonal reciprocity: Centrality

The central position refers to the access channel to various knowledge and resources in the network (Sytch and Tatarynowicz, 2014). Network centrality means having more communicative ties with other people (Freeman, 1979; Wasserman and Faust, 1994). Accordingly, I assume that when prosocials and proselfs are embedded together, prosocials may be relatively positioned closer to the central part of the network compared with proselfs. Consequently, the network position of prosocials and proselfs may limit their accessible opportunities to

obtain useful information from others. In the following sections, I explain how the network position of prosocials is affected by their peers' reaction.

Previous studies argued that people will place the most trustworthy people in the network center (Wu, Yeh, and Hung, 2012). Thus, prosocials displaying collective preferences may be perceived by peers as most trustworthy and consequently placed in the center of the network. Network theory states that prosocials build numerous communicative ties with others when they generously share their information and ideas with others, which directly decides their central position in the network. From their peers' perspective, peers' reciprocal knowledge sharing may have the power to centralize prosocials in the network, because when peers share their knowledge as a reciprocal reaction, prosocials can acquire much information through each of the mutual exchange relationships with other peers. As a result, prosocials are easily perceived as the center and as attractive knowledge sharing partners (Anderson, 2008; Sparrowe et al., 2001; Tsai, 2000).

Hypothesis 3a: Other's knowledge sharing is positively related to network centrality.

3.2 Interpersonal revenge: Isolation

Hiding behaviors may temporarily bring proselfs some competitive advantages and higher chances of winning (Cumming, Smoll, Smith, and

Grossbard, 2007). However, in the network context, proselfs' knowledge hiding behaviors can hurt them in the long run. As mentioned earlier, people represent one of the components in the network and they always communicate and exchange ideas with each other. Proselfs' knowledge withholding behavior indicates that they unilaterally cut off channels and opportunities to communicate with others. Without equal contribution and exchange, other people will also choose to exhibit the same knowledge hiding behaviors to punish those distrustful objects (Connelly et al., 2012). Consequently, when most peers in the network decide to shut down their knowledge circulation, proselfs can protect their existing knowledge from being lost but they will also lose opportunities to retrieve new and diverse information. Depending on the theoretical statement of network position, proselfs with less information are either isolated from the communication network or placed in the peripheral position of the network (Burt, 1992; Granovetter, 1973).

Hypothesis 3b: Other's knowledge hiding is positively related to network isolation.

3.3 Network position and creativity

Scholars stated that the core position of a network refers to superior access to information and knowledge through the entire network context (Mintz and Schwartz, 1981). Thus, prosocials in the central position have opportunities to interact frequently with employees who have different opinions and various ideas

(Burt, 2005; Cross and Cummings, 2004). In particular, they can access peers' innovative ideas more easily than others (Tsai, 2001; Ibarra, 1993a). Specifically, prosocials' network centrality connects them through larger knowledge and idea sources, thereby benefitting them and triggering them to become more creative (Wu, Yeh, and Hung, 2012; Burt, 2004). Thus, I hypothesize that peers' reciprocal knowledge sharing may centrally position prosocials. Consequently, prosocials obtain more novel ideas, which enhance their creativity performance.

Other studies revealed that a peripheral firm in network communities has lesser ties with other community members (Borgatti and Everett, 1999). Based on the relationship between network isolation and creativity, some studies have stated the opposite, indicating that isolation of a team lessens distraction from the outside world and strengthens team members' ability to focus on generating new ideas (Sutton and Kelley, 1997; Arieti, 1976). However, in the network context, isolation or peripheral position means less or no access to communication with others. Literature indicated that innovative ideas are generated from communication with others (Monge, Cozzens, and Contractor, 1992). Thus, proselfs' isolated position blocks their channel to new information. Proselfs will gradually exhaust their personal resources, such as knowledge or ideas and eventually fail to create something new or novel. Consequently, I suppose that proselfs' isolation may decrease their creativity performance in the network.

Hypothesis 4a: Network centrality is positively related to individual creativity.

Hypothesis 4b: Network isolation is negatively related to individual creativity.

4. Moderating effects of team's average prosocial and proself orientation

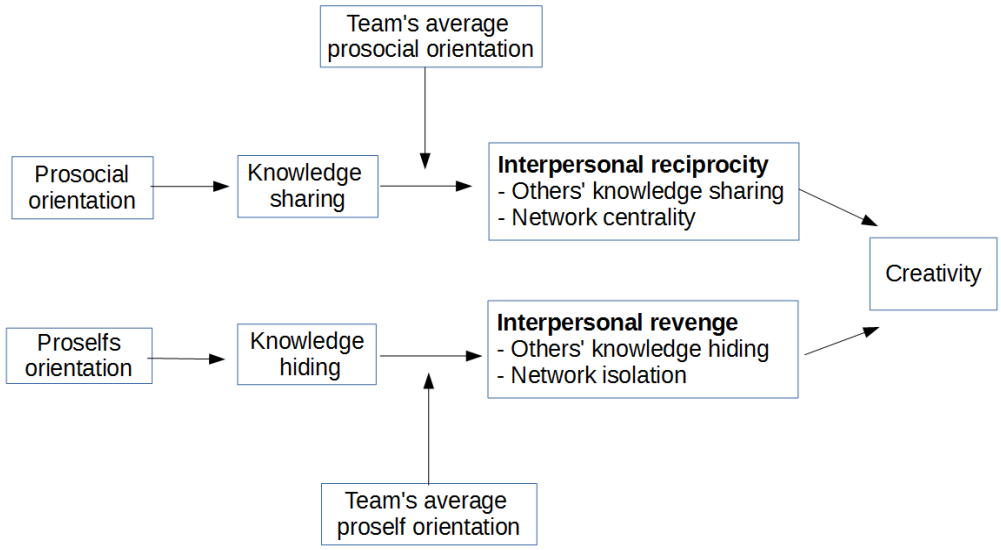
I hypothesized earlier that peers will reciprocate positively to a prosocial's knowledge sharing and take revenge for a proself's knowledge hiding. However, team members' SVO composition, that is, team members' SVO on average, may have a moderating effect on team members' knowledge exchange dynamics. Prosocials place more emphasis on mutual trust and reciprocal relationship with other people; hence, they always repay others' kindness by contributing their resources and information (Wasko and Faraj, 2000). However, when a team is composed mainly of prosocial members, the individual prosocial motivation of some members will become more contagious to others; such motivation may also ascend to become the team's collective value to benefit others through their work (Morgeson and Hofmann, 1999; Li, Kirkman, and Porter, 2014). A team's collective value is to improve the team's experience and effectiveness; hence, team members will have greater commitment to achieve collective goals (Aubé and Rousseau, 2005). In other words, employees in a team with more prosocials will work harder to achieve a team's goals, instead of having more appreciation for individual contribution. Therefore, I propose that a team's prosocial orientation on

average will reduce or attenuate the interpersonal positive relationship between a prosocial's knowledge and others' reciprocal knowledge sharing.

When prosocials and proselfs are embedded together in a team, prosocials contribute more to the knowledge exchange relationship with other members, which facilitates proselfs' free riding on prosocials' kindness. In this situation, prosocials will choose to withhold their knowledge to take revenge for proselfs' distrust and noncooperation (Smeesters et al., 2003; De Cremer and Van Lange, 2001; Boone, Declerck, and Kiyonari, 2010). However, when average team members are proselfs, they view other people in a more homogeneous manner and may have more difficulty perceiving other proselfs' hiding behaviors, causing them to respond with less knowledge hiding (Bogaert, Boone, and Declerck, 2008). Thus, I hypothesize that team members' proself orientation on average also has a moderating effect in attenuating peers' reciprocal revenge for a proself's knowledge hiding.

Hypothesis 5. A team's average prosocial (proself) orientation will moderate the relationship between one's orientation and others' knowledge sharing (for prosocial) or knowledge hiding (for proself). Therefore, when a team's average prosocial/proself orientation is high, the relationship is weak between one's prosocial/proself orientation and peers' knowledge sharing/hiding.

Figure 1. Research model



III. METHODS

1. Sample and procedure

To validate the theoretical research model, I collected data from work teams in organizations in the technological, financial, and manufacturing industries of Taiwan and Korea. The teams perform various functions, including general administration, operation, marketing, and research and development. I distributed the survey to 74 teams (320 individuals) in Taiwan and 11 teams (53 individuals) in Korea, with three to seven members per team. Among the 74 teams, 69 (301 individuals) from Taiwan and 11 (53 individuals) from Korea returned the surveys, resulting in 95% response rate. However, among the respondents from Taiwan, 15 team samples (156 individuals) were removed because the surveys were not completed correctly. The final sample included 253 individuals working in 65 teams. However, because of the sensitivity of evaluating peers, variables such as reciprocated knowledge sharing and hiding were collected from only 25 teams (103 individuals) out of 65 teams. The team leader and team members of each team participated in the survey, which took about 10–15 minutes to complete. Surveys for team members include demographic information, individual value orientation, KMBs, peer evaluation on their KMBs, the network communication centrality, and the degree of influence in interpersonal relationship. During peer evaluation, each team member specified all the names of their peers and evaluated whether or not

each team member shares or hides his or her knowledge with each peer and assessed whether each team member occupies central positions in communication and exert influence over decisions in the team. Surveys for team leaders include assessment of each team member's creative performance.

The final sample included 46.6% males and 53.3% females with a mean age of 33.9 years. Nearly 43.5% of team members graduated from university, 41% had master's degrees, 8.13% graduated from middle school, and 7.72% completed college. On average, team members have 4.19 years of team tenure and 6.14 years of organizational tenure. Team leaders consisted of 78.5% males and 21.5% females, and their mean age was 39.6 years. 55.4% of team leaders had master's degrees and 30.8% of the participants graduated from university. Team leaders have 6.1 years of team tenure and 10.3 years of organizational tenure on average. The total sample of team leaders and members had different functional backgrounds: 35.5% in research and development, 16.1% in marketing, 12.9% in administration, 9.7% in manufacturing, and 25.8% in other fields.

2. Measures

Data were collected from two sources, namely, team members and team leaders, to avoid potential common method bias (Podsakoff et al., 2003). Team members responded to self-reports (e.g., value orientations, and knowledge sharing/hiding behaviors) and peer evaluation (e.g., reciprocated knowledge

sharing/hiding, and centrality). In addition, team leaders evaluated the creative performance of each team member. All items were rated on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree" (1= strongly disagree, 5= strongly agree).

2.1 Self-report

Prosocial and proself value orientations. I assessed prosocial and proself value orientations using scales validated by Auliffe et al.'s (2003) collectivistic and individualistic value orientations as the best alternative. To assess people's prosocial and proself value orientations, previous studies mostly used measures by Van Lange et al. (1997). Such studies asked survey participants to allocate points between self and others on nine different choice scenarios. In those scenarios, people with proself value orientation may allocate more points to self, whereas people with prosocial value orientation may allocate more points to others. However, the point allocation method was inappropriate for the present study because this study contrasts the effects of prosocial and proself value orientations on creativity. Some researchers also measured either prosocial or prosocial value orientations alone, such as prosocial behaviors (Carlo and Randall, 2002) and prosocial motivation (Hu and Liden, 2015) for the former, or social loafing (Karau and Williams, 1993) and free riding (Albanese and Van Fleet, 1985) for the latter. These studies lack the validity of contrasting two constructs by not implementing

both constructs in a single study. No appropriate measures are available to assess prosocial and proself value orientations independently. Thus, the best alternative was to leverage Auliffe et al.'s (2003) collectivistic and individualistic value orientations. Their measures also evaluate people's value orientation toward self and others. The sample items for prosocial value orientations were "I concentrate on achieving my group's goals" and "I think it is important to give priority to group interests as much as possible" (α= .82). The sample items for proself value orientations were "I concentrate on achieving my own personal goals" and "I think it is important to give priority to personal interests as much as possible" (α= .65).

Knowledge sharing and knowledge hiding. I adopted four items from Connelly et al. (2012) to assess knowledge sharing (α= .79) and knowledge hiding (α= .89). The sample items for knowledge sharing were "I looked into the request to make sure my answers were accurate" and "I told my coworker exactly what s/he needed to know." The sample items for knowledge hiding were "agreed to help him/her but never really intended to" and "pretended that I did not know the information." Prior to rating the extent to which each individual shared with or hide knowledge from coworkers, knowledge was first defined in the instruction. Specifically, knowledge was defined as "*certain fact, experience, information, and technology that can be earned through education, learning, mastery, and experience"* (adapted from Connelly et al., 2012).

2.2 Peer evaluation

Peer evaluation was designed to assess employee's reciprocated knowledge sharing, knowledge hiding, and centrality in the interpersonal relationship of the team.

Reciprocated knowledge sharing and knowledge hiding. I also used Connelly et al.'s (2012) measure to evaluate how team members share or hide their knowledge with regard to certain team members. The example items were "I shared ideas, business knowledge, and information with this person" and "I pretended that I did not know the information to this person."

Central position and influence in interpersonal relationship. I measured how team members perceived peers' communication position and influence in the team. To measure the communication position of peers, I developed a single item "This person occupies central positions in our team's work-related communication" by rephrasing the definition of network centrality from Marsden (1990). To measure how much influential position certain team members possessed within the team, I leveraged Flynn's (2003) measure which, in turn, is from Anderson, John, Keltner, & Kring (2001). The original item was 'How much influence does this person exert over decisions at work'. I changed the content further to 'This person

exerts substantial influence over decisions in our team'' to determine employee perceptions of their peers.

2.3 Team Leader's evaluation

Creativity. Team member creativity was evaluated by their team leader or supervisors. Gilson and Madjar (2011) differentiated two forms of creative performance: radical and incremental creativity. They suggested that the two forms were associated with different antecedents. Intrinsic motivation, problem-driven, and abstract theory-related creative ideas are associated mostly with radical creativity; whereas extrinsic motivation, solution-driven, and concrete practice-based ideas are associated with incremental creativity. Using those two forms, I evaluated creativity to examine whether prosocial or proself values are related to different forms of creativity. The sample items for radical creativity were "This person is a good source of highly creative ideas" and "This person demonstrates originality in his or her work" (α= .89). Member incremental creativity was measured using the items "This person uses previously existing ideas or work in an appropriate new way" and "This person is very good at adapting already existing ideas or work" (α= .88). The two forms of creativity indicated very high reliability (α= .91) and similar patterns of results were obtained; hence, I combined the two measures to evaluate overall employee creativity.

2.4 Control variables

I controlled for gender, education level, organizational tenure, rank, task interdependence with other team members, and the country. Previous research on knowledge sharing and creativity indicated how demographic factors (such as gender, age, education, tenure, and rank) influence individual KMB and creative performance (Choi, 2007; Wang and Noe, 2010). I included all these factors except for age, because age exhibited high correlation to organizational tenure. Education was assessed as 1 if "below high school", 2 if "high school graduate", 3 if "specialized college graduate", 4 if "college graduate", 5 if "graduate school graduate". Organizational tenure was measured by directly asking the number of years and months in the organization. Rank was assessed as "low status", whether they were employees (low status=1) or managers or above (low status=0). I also included task interdependence level rated during peer evaluation, because the degree of task interdependence could affect the degree of knowledge sharing or hiding. Given that a quarter of our sample was collected from a different country, I included country to adjust for any country-level effect and coded 1 for data from South Korea and 0 from Taiwan.

3. Survey translation procedure

Given that the survey participants were from Taiwan and Korea, I translated the English measures into Chinese and Korean to allow them to respond directly to each question without any language conflicts. After completing the translation into

Chinese, a native Chinese professor in the field of organizational behavior in China reviewed the translated version. The Korean version was reviewed by a doctoral student who specializes in organizational behavior.

IV. RESULTS

1. Descriptive statistics

Table 1 provides the descriptive statistics and correlations among the variables examined. Results show that the key variables examined in this study exhibited high correlations, indicating possible significant relationships. For example, knowledge sharing and prosocial value orientation had a positive correlation of .30 (significant at the $p<.001$). Knowledge hiding and prosocial orientation had a negative correlation of -.35 (significant at the $p<.001$). Education, organization tenure, rank, task interdependence, and country exhibit significantly high correlations to our variables of interest (I controlled for these variables during analyses).

2. Hypothesis testing

The hypotheses were tested by performing a multivariate hierarchical linear modeling of data (HLM; Bryk & Raudenbush, 1992) (because the data had a nested structure) with multiple individual responses embedded in teams. I used grand mean centering of all study variables. First, I expected that the different SVOs of the employees may affect their KMBs. Thus, in hypotheses 1a and 1b, I argued that prosocial value orientation is positively related to knowledge sharing, whereas

proself value orientation is positively related to knowledge hiding. In Models 1 and 2 from Table 2, prosocial value orientation displayed significant positive relationship with knowledge sharing (β = .28, p < 0.01), and exhibited significant negative relationship with knowledge hiding (β = - .43, p < 0.001). Hence, hypothesis 1a was supported. On the other hand, the relationship between proself value orientation and knowledge hiding was insignificant, rejecting hypothesis 1b; however, proself value orientation exhibited significant negative relationship with knowledge sharing (β = - .13, p < 0.05).

I also examined how one's knowledge sharing or hiding is related to peers' reciprocated knowledge sharing or hiding. Hypothesis 2a proposed that knowledge sharing is positively related to peers' reciprocated knowledge sharing, whereas hypothesis 2b proposed that knowledge hiding is positively related to peers' reciprocated knowledge hiding. According to the results in Model 3, the relationship between knowledge sharing and peers' reciprocated knowledge sharing was significant (β= .28, p < 0.05), and supports hypothesis 2a. In Model 4, the relationship between knowledge hiding and peers' reciprocated knowledge hiding also showed significant positive relationship (β=.33, p < 0.01), and thus, hypothesis 2b is supported.

In terms of an employee's centrality in interpersonal relationship as a result of knowledge sharing or hiding, I suggested that a peer's reciprocated knowledge

sharing or hiding may affect an employee's central position in the interpersonal relationship. Hypothesis 3a proposed that peers' reciprocated knowledge sharing is positively related to network centrality, whereas hypothesis 3b proposed that peers' reciprocated knowledge hiding is positively related to network isolation. Based on the analysis results of Model 5 and Model 6, others' knowledge sharing is significantly related to a more influential position in the team network (β= .34, p <0.001) and a more central communication position (β= .52, p <0.001), thereby supporting hypothesis 3a. In addition, Model 5 in Table 2 shows that others' knowledge hiding has a significant negative relationship with one's influential position in the team network (β= - .25, p <0.05), thereby supporting hypothesis 3b. Therefore, when employees share knowledge, peers may also share their knowledge reciprocally, resulting in a stronger central position. By contrast, when employees hide knowledge, peers may also hide knowledge reciprocally, resulting in a weaker central position.

Based on prior studies, people in central positions have many ties and positive knowledge sharing relationship with others, thereby enabling them to reach much information and increase their creative performance (Wasserman and Faust, 1994; Tsai, 2001; Anderson, 2008). I suggested that network centrality has positive relationship with creativity, whereas isolated position has negative relationship with creativity in hypotheses 4a and 4b, respectively. Based on the

results of the analysis in Model 7 in Table 2, a more centralized position in the team was found to have a significant positive relationship with employee's individual creativity (β= .31, p <0.05). Therefore, hypotheses 4a and 4b were supported.

Apart from the effects of team members' individual SVO, I also investigated the interaction between the teams' average prosocial or proself value orientation and an individual's own prosocial or proself value orientation in predicting peers' reciprocated knowledge sharing or hiding. In hypothesis 5, I expected that when a team's average prosocial value orientation is high, the relationship between one's prosocial value orientation and peers' reciprocated knowledge sharing or hiding will weaken. As shown in Model 8, the interactions between prosocial and team's average prosocial value orientation (β= .49, p <0.05) and those between proself and team's average proself value orientation (β= -.40, p <0.001) were significant in predicting reciprocated knowledge sharing. In Model 9, the interaction between proself and team's average proself value orientation was not significant in predicting reciprocated knowledge hiding, but the interaction between prosocial and team's average prosocial value orientation was significant (-.83, p <0.05). Hence, hypothesis 5 was partially supported. However, the interaction effects were different from what I expected. To interpret the significant interaction effects further, I conducted a simple slope analysis that considers the variance of covariates and the multi-level unique effect (Aiken and West, 1991; Bauer &

Curran, 2005) (results in Figure 2). When a team's average prosocial value orientation is high, team members who display higher prosocial value orientation receive more knowledge sharing than those who show lower prosocial value orientation. When a team's average prosocial value orientation is low, team members who display higher prosocial value orientation receive less knowledge sharing than those who exhibit lower prosocial value orientation (Figure 2). This finding was contrary to my hypothesis.

Table 1

Descriptive statistics and correlations

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Education	3.17	.89	1.00													
2. Organization tenure	6.14	6.51	-.28***	1.00												
3. Male	.47	.50	.29***	-.11	1.00											
4. Low status	.78	.42	-.03	-.02	-.09	1.00										
5. Country	.21	.41	-.01	.06	.01	.02	1.00									
6. Task interdependence	3.74	.58	.15*	-.01	.11	-.15*	-.26***	1.00								
7. Proself value orientation	3.50	.67	-.05	-.35***	.07	-.00	.09	-.03	1.00							
8. Prosocial value orientation	4.04	.60	-.00	-.01	.12	-.06	.04	.13*	-.05	1.00						
9. Knowledge sharing	3.86	.53	.03	-.06	-.02	-.05	-.04	-.03	.11	.30***	1.00					
10. Knowledge hiding	1.97	.66	-.16*	.01	.07	-.10	.04	-.04	.11	-.35***	-.29***	1.00				
11. Reciprocated KS	3.64	.73	-.10	.02	-.10	-.01	-.35***	.49***	-.14	.17	.35***	-.22*	1.00			
12. Reciprocated KH	2.40	.99	-.02	-.10	.09	.04	.39***	.00	.38***	-.19	-.18	.46***	-.39***	1.00		
13. Interpersonal influence	3.51	.60	.10	.05	.10	-.16**	-.16*	.53**	-.06	.20**	.12*	-.09	.55***	-.14	1.00	
14. Creative performance	3 .62	.71	.07	.12	-.01	-.12	-.03	.09	-.14*	.19**	.21***	-.05	.26**	-.35***	.28***	1.00

Note: n=253. **p<.05, **p<.01, ***p<.001*

Table 2

Variables	Outcome: Knowledge sharing Model 1	Outcome: Knowledge hiding Model 2	Outcome: Reciprocated knowledge sharing Model 3	Outcome: Reciprocated knowledge hiding Model 4	Outcome: Centrality (influential position) Model 5	Outcome: Centrality (communication) Model 6	Outcome: Individual Creativity Model 7	Outcome: Reciprocated knowledge sharing Model 8	Outcome: Reciprocated knowledge hiding Model 9
Intercept	3.88(.04)***	1.96(.04)***	3.85(.07)***	2.08(.11)***	3.23(.09)***	3.32(.10)***	3.68(.07)***	3.63(.05)***	2.39(.08)***
Step 1: Controls									
Education	.06(.04)	-.13(.05)**	-.05(.05)	-.03(.07)	-.03(.05)	-.09(.06)	.20(.09)*	-.09(.04)*	.00(.08)
Organization Tenure (yrs)	.00(.01)	-.00(.01)	-.01(.01)	.02(.01)†	.00(.01)	-.01(.01)	-.00(.01)	-.01(.01)	.01(.01)
Male (1=male, 0=female)	-.14(.07)*	.18(.08)*	.12(.10)	.08(.13)	.18(.08)*	.06(.10)	-.28(.13)*	.11(.08)	.18(.15)
Status (1=employee, 0=manager above)	-.13(.09)	-.16(.10) †	.14(.12)	.30(.15)*	-.18(.09)*	-.01(.11)	-.17(.10)†	.08(.12)	.39(.17)*
Task interdependence	-.10(.06)	.06(.07)	.43(.09)***	.41(.12)**	.54(.09)***	.63(.11)***	-.00(.16)	.43(.10)***	.52(.12)***
Country (1=Korea, 0=Taiwan)	-.10(.10)	.09(.10)	-.64(.11)***	.18(.20)***	.65(.13)**	.17(.18)	.47(.15)***	-.68(.11)***	.28(.15)***
Step 2: Main effects									
Prosocial value orientation	.28(.06)***	-.43(.06)***	-.05(.13)	-.27(.15) †	.07(.08)	.02(.09)	.17(.13)	-.06(.08)	-.26(.14) †
Proself value orientation	-.13(.05)*	.08(.08)	-.09(.11)	.51(.12)***	.02(.08)	-.03(.09)	.03(.12)	-.12(.10)	.55(.14)***
Knowledge sharing			.28(.11)*	.14(.12)	-.11(.08)	-.05(.09)	.02(.13)	.33(.07)***	.13(.13)
Knowledge hiding			-.18(.11)	.33(.11)**	-.11(.09)	-.07(.09)	.23(.12) †	-.13(.07)*	.40(.11)***
Reciprocated knowledge sharing					.34(.09)***	.52(.09)***	.15(.11)		
Reciprocated knowledge hiding					-.25(.13)*	.02(.13)	-.32(.11)**		
Network centrality							.31(.16)*		
Team's average prosocial value orientation								-.11(.15)	-.80(.29)*
Team's average proself value orientation								-.15(.16)	-.35(.26)
Step3: Moderating effects									
Prosocial * Team's average prosocial								.49(.23)*	-.83(.36)*
Proself * Team's average proself								-.40(.09)***	.22(.23)
Individual-level variance, δ^2	.22	.25	.16	.23	.08	.11	.28.	.18	.23
Change in variance, $\Delta\ \delta^2$	.03	.10	.10	.17	.15	.20	.05	.07	.17
Proportion of explained variance (%)	12.10	27.56	38.23	42.65	64.62	63.98	14.63	28.70	42.82

Hierarchical Linear Models predicting (reciprocated) knowledge sharing/hiding, network centrality, and creativity

Note. N=253(N=103 for reciprocated knowledge sharing/hiding). Values in parentheses are standard errors; Change in variance calculated based on the difference of individual-level variance between the proposed each model and unconditional model (not provided in the table) with the same DVs; † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

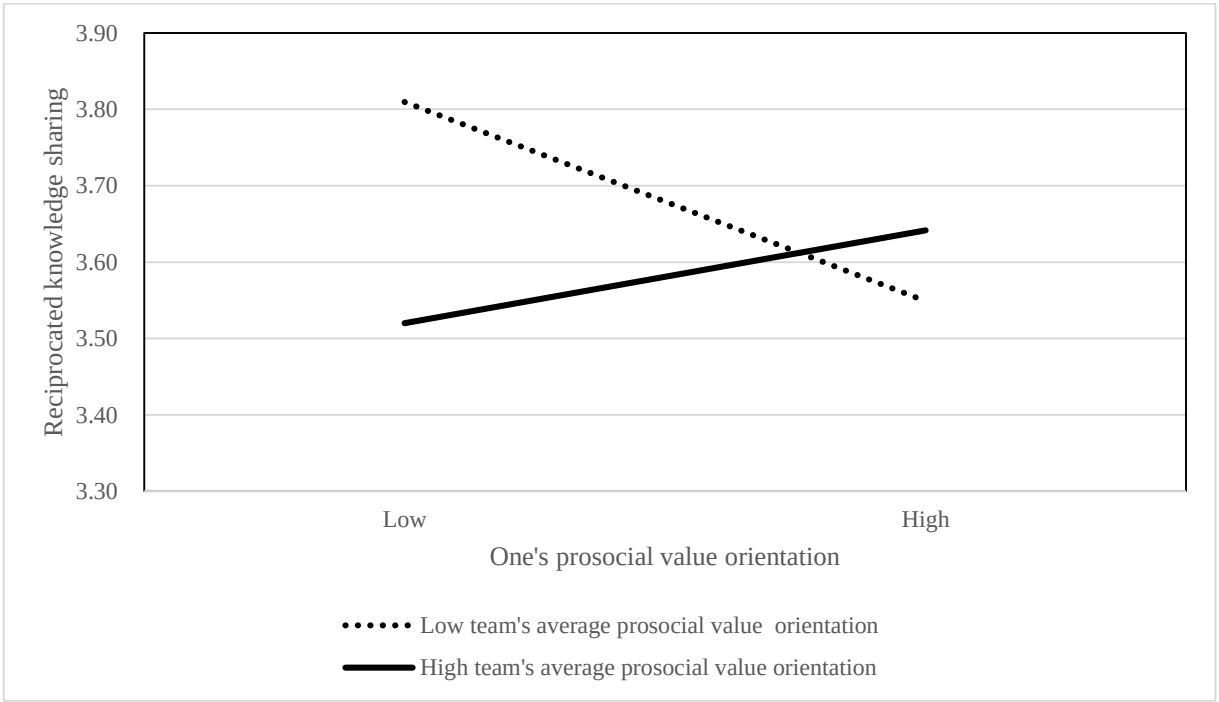


Figure 2. Interaction Between Team's Average Prosocial Value Orientation and Team Member's Prosocial Value Orientation in Predicting Reciprocated Knowledge Sharing and Knowledge Hiding

IV. DISCUSSION AND CONCLUSION

1. Contributions

In terms of interpersonal perspective of knowledge sharing and knowledge hiding, prior research mainly examined employees' interpersonal knowledge sharing/hiding dynamics based on social exchange theory (Blau, 1964; Foss et al, 2009; Wang & Noe, 2010; Connelly & Kelloway, 2003; Connelly et al. 2012; Černe et al. 2014). However, people have different personalities and preferences, and their trait factors may directly affect their interpersonal knowledge exchange relationship. This study identified prosocial individuals as sacrificing themselves more to help others when faced with a dilemmatic issue (Van Lange et al., 1997). Although proselfs do not hide their knowledge, but they also not share knowledge to others, aligning with the argument of Cress (2005) that proselfs are unwilling to cooperate and prefer to free-ride other's contributions.

This study tested and supported the hypothesis that peers reciprocally share more knowledge and information toward prosocial members' knowledge sharing, and hide personal knowledge to punish members' knowledge hiding from an interpersonal perspective. However, prior studies stated that knowledge sharing is a social dilemma behavior which may consume an individual's time and resources

(Cabrera and Cabrera, 2002). The results indicate to management that sharing knowledge voluntarily is not only a personal resource consuming behavior; conversely, it can also benefit them by receiving more help and positive reciprocity from other peers than those selfish people.

Furthermore, some existing studies only identified employee knowledge sharing behavior as being positively associated with individual and collective creative performance (Cabrera and Cabrera, 2002; Bartol and Srivastave, 2002; Nonaka, 1994), overlooking the possibility that peers' responses and reciprocal behaviors may affect an employee's individual creativity. Combined with network theory, I proposed and proved that compared to an individual's active knowledge sharing behavior, peers' reciprocal hiding directly affects employee creativity (β= -.32, p <0.01), and peers' knowledge sharing/ hiding toward certain people also has more powerful effect on his/her communication position and influence in team network which in turn affect an individual's creative performance. Future studies can further test how an employee's individual creative performance varies when an imbalanced knowledge exchange relationship develops, such as sharing knowledge but encountering more hiding from others.

Aside from investigating the SVO at an individual level, I also investigated SVO in the team level. This study identified that when a team's average prosocial value orientation is high, the team climate encourages more member prosocial

value, so that for individuals with prosocial value orientation it is possible to get more positive reciprocity from other prosocial peers. However, when the team's average prosocial value orientation is low, prosocial individuals receive a higher degree of punishment from other peers. The reason for this could be that proself peers perceive prosocial members to be doing impression management (Bolino, 1999; Bolino, Varela, Bande, and Turnley, 2006); they share their knowledge deliberately to impress their leaders. This study finds that the degree of a team's prosocial value orientation may interact with an individual's SVO, consequently affecting peers' perception and their reciprocal KMB. Future researchers need to investigate SVO more on the team level and observe how it affects both team and individual effectiveness and process.

2. Limitation and future research directions

The present study could be expanded by improving existing limitations. The first limitation is the collection of samples from Asian countries (Taiwan and Korea). As Auliffe et al. (2003) stated in their study, people in a group with collectivistic norm may display more collectivist behaviors, which may be evaluated as positive by others. In terms of Taiwan and Korea's collectivistic culture, the teams in these countries may appreciate members' collectivist or prosocial behaviors more than selfish and individualistic actions, and thus, samples in the study exhibited a significant tendency to answer more positively toward

knowledge sharing and to avoid revealing their true knowledge hiding behaviors. Future studies are necessary to collect various samples from different countries to study how the culture context affects individuals' KMB.

Collecting Taiwan and Korea's samples concurrently resulted in some cultural issues and limitation in the present study. Although, Taiwan and Korea's data exhibit no significant effect on most of the study variables, cultural differences certainly influence peers' reciprocated knowledge sharing/ hiding. The limitation of collecting a small sample size when evaluating peers' reciprocated knowledge sharing/ hiding may be the reason. To match and compare team members' interpersonal relationship with certain people, I requested survey participants to write their peer's name when evaluating their members. The problem with this step is that most of the team leaders and members were unwilling to reveal any member's name, aiming to protect their personal privacy and interpersonal relationship with their coworkers. Limitations arising from a country's difference and the difficulty of collecting peer evaluations require improvement in future studies.

The last study limitation was that all research variables were collected concurrently. To show how individuals interact with each other and how their positions change because of other's reciprocity, it would be difficult to use a short-term study to present each variable's causal relationship. Hence, in the future,

a longitudinal research would be more appropriate for observing peers' response toward members' knowledge sharing and hiding.

For future research, testing an employee's knowledge sharing and hiding interaction from an employee's distance perspective would be interesting. Yuan et al. (2010) stated that when employees are embedded in the high task interdependence context, they rely closely on each other's expertise and knowledge. Future researchers could examine what occurs when employees' tasks are highly interdependent and they need others' knowledge to complete their work, specifically whether they will they revenge more fiercely for other's cheating or knowledge hiding behaviors. Moreover, although previous research already revealed that people in higher positions in an organization display higher intention to share their knowledge (Grubić-Nešić et al, 2015), future studies need to investigate further how employees react towards the knowledge hiding behaviors of those people in higher position or those with more power in the organization.

REFERENCES

Aiken, L. S., West, S. G., & Reno, R. R. (1991). 'Multiple regression: Testing and interpreting interactions.' Sage.

Albanese, R. & Van Fleet, D. D. (1985). 'Rational behavior in groups: The freeriding tendency'. The Academy of Management Review, 10 (2), 244-255.

Anderson, M. H. (2008). 'Social networks and the cognitive motivation to realize network opportunities: A study of managers' information gathering behaviors.' Journal of Organizational Behavior, 29, 51–78.

Anderson, C. P., John, O. J., Keltner, D., & Kring, A. M. (2001). 'The origins of status within face-to-face social groups'. Journal of Personality and Social Psychology, 81: 116–132.

Arieti, S. (1976). 'Creativity: The Magic Synthesis'. New York, NY: Basic Books.

Aubé, C., & Rousseau, V. (2005). 'Group goal commitment and group effectiveness: The role of task interdependence and supportive behaviors.' Group Dynamics, 9, 189–204.

Auliffe, Jetten, Hornsey, and Hogg. (2003). 'Individualist and collectivist norms: when it's ok to go your own way.' European Journal of Social Psychology, 33, 57-70.

Bachmann, A.S. (2006). 'Melting pot or tossed salad? Implications for designing effective multicultural workgroups'. Management International Review,

46(6).721-747.

Baer M. (2010). 'The Strength-of-Weak-Ties Perspective on Creativity: A Comprehensive Examination and Extension'. Journal of Applied Psychology. 95 (2), 592-601.

Bartol, K. M., & Srivastava, A. (2002). 'Encouraging knowledge sharing: the role of organizational reward systems'. Journal of Leadership & Organizational Studies, 9(1), 64-76.

Batson, C. D., Ahmad, N., Powell, A. A., & Stocks, E. L. (2008). 'Prosocial motivation.' In J. Y. Shah & W. L. Gardner (Eds.), Handbook of motivation science: 135–149. New York,

NY: Guilford Press.

Bauer, D. J., & Curran, P. J. (2005). Probing interactions in fixed and multilevel regression: Inferential and graphical techniques. *Multivariate Behavioral Research*, *40*, 373-400.

Bello, O.W. & Oyekunle, Rafiat A. (2014). 'Attitude, perceptions and motivation towards Knowledge sharing: views from universities in Kwara State, Nigeria.' African Journal of Library, Archives and information Science, 24 (2), 123-134.

Blau, P. (1964). 'Exchange and Power in Social Life.' New York: Wiley.

Blanchard, A. L. (2008). 'Testing a model of sense of virtual community'. Computers in Human Behavior, 24(5), 2107-2123.

Bogaert, S., Boone, C. & Declerck, C. (2008). 'Social value orientation and

cooperation in social dilemmas: a review and conceptual model'. British Journal of Social Psychology, 47, 453–80.

Bolino, M. C. (1999). 'Citizenship and impression management: Good soldiers or good actors?' Academy of Management Review, 24, 82–98.

Bolino, M.C., Varela,J.A., Bande,B., & Turnley, W.H. (2006). 'The impact of impression management tactics on supervisor ratings of organizational citizenship behavior.' Journal of Organizational Behavior, 27, 281–297.

Boone, C., Declerck, C. & Kiyonari, T. (2010). 'Inducing cooperative behavior among proselfs versus prosocials: the moderating role of incentives and trust'. Journal of Conflict Resolution, 54, 799–824.

Bordia, P., Restubog, S. L., & Tang, R. L. (2008). 'When employees strike back: Investigating mediating mechanisms between psychological contract breach and workplace deviance'. Journal of Applied Psychology, 93, 1104-1117.

Bordia P., Kiazad K., Restubog S. L. D., Difonzo N., Stenson N., and Tang R., L. (2014). 'Rumor as Revenge in the Workplace'. Group & Organization Management, Vol. 39(4), 363 -388.

Borgatti, S. P., & Everett, M. G. (1999). 'Models of core/ periphery structures'. Social Networks, 21: 375–395.

Bryk, A. S., & Raudenbush, S. W. (1992). Hierarchical linear models. Newbury Park, CA: Sage.

Burt, R. S. (1992). 'Structural holes: The social structure of competition'. Cambridge, MA: Harvard University Press.

Burt, R. S. (2004). ‘Structural holes and good ideas’. American Journal of Sociology, 110, 349–399.

Burt, R. S. (2005). ‘Brokerage and closure: An introduction to social capital’. Oxford, U.K.:Oxford University Press.

Cabrera, A., & Cabrera, E. F. (2002). ‘Knowledge-sharing dilemmas’. Organization studies, 23(5), 687-710.

Černe, M., Nerstad, C. G., Dysvik, A., & Škerlavaj, M. (2014). ‘What Goes Around Comes Around: Knowledge Hiding, Perceived Motivational Climate, and Creativity’. Academy of Management Journal, 57(1), 172-192.

Choi, B. & Lee, H. (2001). ‘Justification on knowledge management strategies: a new perspective on knowledge creating process’, Proceedings of the Conference of PACIS 2001, Seoul, June 19-20, pp. 108-122.

Choi, J. N. (2007). ‘Group composition and employee creative behaviour in a Korean electronics company: Distinct effects of relational demography and group diversity.’ Journal of Occupational and Organizational Psychology, 80(2), 213-234.

Cohen, S.G., and Bailey, D.E. (1997). ‘What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite,’ Journal of Management, 23, 3, 239-290.

Connelly, C. E., Zweig, D., Webster, J., & Trougakos, J. P. (2012). ‘Knowledge hiding in organizations’. Journal of Organizational Behavior, 33: 64–88.

Connelly, C. E., & Kelloway, E. K. (2003). ‘Predictors of employees’ perceptions of knowledge sharing cultures.’ Leadership and Organization Development Journal, 24: 294-301.

Catherine E. Connelly & David Zweig (2015). 'How perpetrator and targets construe knowledge hiding in organizations'. European Journal of Work and Organizational Psychology, 24:3, 479-489.

Carlo, G., & Randall, B.A. (2002). ‘The development of a measure of prosocial behaviors for late adolescents’. *Journal of Youth and Adolescence, 31*, 31-44.

Cress, U. (2005). ‘Ambivalent effect of member portraits in virtual groups.’ Journal of Computer Assisted Learning, 21, 281–291.

Cross, R., & Cummings, J. N. (2004). ‘Tie and network correlates of individual performance in knowledge intensive work’. Academy of Management Journal, 47, 928–937.

Cumming, S. P., Smoll, F. L., Smith, R. E., & Grossbard, J. R. (2007). ‘Is winning everything? The relative contributions of motivational climate and won-lost percentage in youth sports’. Journal of Applied Sport Psychology, 19, 322–336.

De Cremer, D. & van Lange, P. A. M. (2001). ‘Why prosocials exhibit greater cooperation than proselfs: the roles of social responsibility and reciprocity’. European Journal of Personality, 15, S5–S18.

De Dreu, C. K. W. (2006). ‘Rational self-interest and other orientation in organizational behavior: A critical appraisal and extension of Meglino and

Korsgaard (2004)'. Journal of Applied Psychology, 91: 1245– 1252.

Dixon, N. (2000). 'Common knowledge: how companies thrive by sharing what they know'. Harvard business school press, Boston, MA.

Foss N. J., Minbaeva D. B., Pedersen T., & Reinholt M. (2009). 'Encouraging knowledge sharing among employees: how job design matters'. Human Resource Management, 48 (6), 871– 893.

Flynn, F. J. (2003). 'How Much Should I Give and How Often? The Effects of Generosity and Frequency of Favor Exchange on Social Status and Productivity'. Academy of Management Journal, 46(5), 539–553.

Freeman, L. C. (1979). 'Centrality in social networks: Conceptual clarification'. Social Networks, 1, 215–239.

Gilson, L.L. & Madjar, N. (2011). 'Radical and Incremental Creativity: Antecedents and Processes.' The Psychology of Aesthetics, Creativity, and the Arts, 5, 21-28.

Gilson, L. L., Lim, H. S., Luciano, M. M., & Choi, J. N. (2013). 'Unpacking the cross-level effects of tenure diversity, explicit knowledge, and knowledge sharing on individual creativity'. Journal of Occupational and Organizational Psychology, 86, 203-222.

Granovetter, M. S. (1973). 'The strength of weak ties'. American Journal of Sociology, 78, 1360–1380.

Grant A. M., & Berry J. W. (2011). 'The necessity of others is the mother of invention: intrinsic and prosocial motivations, perspective taking, and creativity'.

Academy of Management Journal. 54 (1), 73-96.

Grovier, T. (1994). ‘An epistemology of trust’. International Journal of Moral and Social Studies, 8, 155–174.

Grubić-Nešić, L., Matić, D. & Mitrović. S. (2015). ‘The influence of demographic and organizational factors on knowledge sharing among employees in organizations.’ Technical Gazette 22, 4(2015), 1005-1010.

Hansen, M. T. (1999). ‘The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits’. Administrative Science Quarterly, 44, 82–111.

Handgraaf, M. J. J., Van Dijk, E., & De Cremer, D. (2003). ‘Social utility in ultimatum bargaining’. Social Justice Research, 16, 263–283.

Hu, J., & Liden, R. C. (2015). 'Making a Difference in the Teamwork: Linking Team Prosocial Motivation to Team Processes and Effectiveness'. Academy of Management Journal, 58(4), 1102–1127.

Ibarra, H. (1993). ‘Network centrality, power, and innovation involvement: Determinants of technical and administrative roles’. Academy of Management Journal, 36, 471–501

Ilgen, D. R., Hollenbeck, J. R., Johnson, M. & Jundt, D. (2005). ‘Teams in organizations: From I-P-O Models to IMOI models’. In S. T. Fiske, A. E. Kazdin, & D. L. Schacter (Eds.), Annual review of psychology, vol. 56: 517– 543. Palo Alto, CA: Annual Reviews.

Jehn, K. A., Northcraft, G. B., & Neale, M. A.(1999).'Why differences make a difference: A field study of diversity, conflict, and performance in workgroups'. Administrative Science Quarterly, 44, 741–763.

Kankanhalli, A., Tan, B. C. Y., & Wei, K. (2005). 'Contributing knowledge to electronic knowledge repositories: An empirical investigation'. MIS Quarterly, 29(1), 113–143.

Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1986). 'Fairness and the assumptions of economics'. Journal of Business, 59: 285–300.

Karau, S. J. & Williams, K. D. (1993). 'Social loafing: A meta-analytic review and theoretical integration'. Journal of Personality and Social Psychology, 65 (4), 681-706.

Kimmerle, J., Wodzicki, K., Jarodzka, H., & Cress, U. (2011). 'Value of information, behavioral guidelines, and social value orientation in an information-exchange dilemma'. Group Dynamics: Theory, Research, and Practice, 15(2), 173-186.

Knoke, D. 2009. 'Playing well together: Creating corporate social capital in strategic alliance networks'. American Behavioral Scientist, 52: 1690–1708.

Levin, D. Z., & Cross, R. (2004). 'The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer'. Management Science, 50(11), 1477-1490.

Lin, II. (2007). 'Effect of Extrinsic and Intrinsic Motivation on Employee

Knowledge Sharing Intentions'. Journal of Information Science, 33 (2): 135-149.

Li, N., Kirkman, B. L., & Porter, C. O. L. H. (2014). 'Toward a model of work team altruism.' Academy of Management Review, 39: 541–565.

Mael, F. and B. E. Ashforth (1992). 'Alumni and their alma mater: a partial test of the reformulated model of organizational identification', Journal of Organizational Behaviour, 13, 103–123.

Marsden (1990). 'Network data and measurement'. Annual Review of Sociology, 16, 435-463.

Mintz B. & Schwartz M. (1981). 'The structure of intercorporate unity in American business'. Social Problem, 29 (2), 87-103.

Mooradian, T. A., Renzl, B., & Matzler, K. (2006). 'Who trusts?: Personality, trust, and knowledge sharing'. Management Learning, 37(4), 523–540.

Morgeson, F. P., & Hofmann, D. A. (1999). 'The structure and function of collective constructs: Implications for multilevel research and theory development.' Academy of Management Review, 24: 249–265.

Monge, P. R., Cozzens M. D., & Contractor N. S. (1992). 'Communication and motivation predictors of the dynamics of organizational innovation'. Organization Science, 3 (2), 250-274.

Nonaka, I. (1994). 'A dynamic theory of organizational knowledge creation'. Organization Science, 5, 14-37.

Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). 'Organizational citizenship behavior: Its nature, antecedents, and consequences'. Thousand Oaks,

CA: Sage

Perry-Smith, J. E. (2006). 'Social yet creative: The role of social relationships in facilitating individual creativity'. Academy of Management Journal, 49, 85–101.

Raihani, N. J., Thornton, A., & Bshary, R. (2012). 'Punishment and cooperation in nature'. Trends in ecology and evolution, 27 (5), 288-295.

Reinholt, M., Pedersen, T., & Foss, N., J. (2011). 'Why a central network position isn't enough: the role of motivation and ability for knowledge sharing in employee networks'. Academy of management journal. 54 (6), 1277-1297.

Riege A (2007). 'Actions to overcome knowledge transfer barriers in MNCs'. J. Knowl. Manage. 11(1), 48-67.

Smeesters, D., Warlop, L., Van Avermaet, E., Corneille, O. & Yzerbyt. V. (2003). 'Do not prime hawks with doves: The interplay of construct activation and consistency of social value orientation on cooperative behavior'. Journal of Personality and Social Psychology 84, 972-87.

Sparrowe, R. T., Liden, R. C., & Kraimer, M. L. (2001). 'Social networks and the performance of individuals and groups'. Academy of Management Journal, 44, 316–325.

Steinel, W., & De Dreu, C. K. W. (2004). "Social motives and strategic misrepresentation in social decision making". Journal of Personality and Social Psychology, 86, 419-434.

Steinel, W., Utz, S., & Koning, L. (2010). 'The good, the bad and the ugly thing to

do when sharing information: Revealing, concealing and lying depend on social motivation distribution and importance of information'. Organizational Behavior and Human Decision Processes, 113(2), 85-96.

Stillwell, A. M., Baumeister, R. F., & Del Priore, R. E. (2008). 'We're all victims here: Toward a psychology of revenge'. Basic and Applied Social Psychology, 30, 253-263.

Sutton, R., I., & Kelley, T., A. (1997). 'Creativity Doesn't Require Isolation: why product designers bring visitors "backstage"'. California management review. 40(1), 75-91.

Sytch, M & Tatarynowicz, A. (2014). 'Exploring the locus of invention: The dynamics of network communities and firms' in vention productivity'. Academy of Management Journal, 57(1), 249-279.

Teece D.J. (1998). 'Capturing value from knowledge assets: the new economy, markets for know-how and intangible assets'. Calif. Manage, 40(3), 55-79.

Tepper, B., Mitchell, M., & Almeda, M. (2011). 'Examining negative exchange from a relational perspective: Consequences of reciprocating downward hostility in supervisor subordinate relationships'. Paper presented at the Israel Organizational Behavior Conference cosponsored by the Academy of Management and Human Relations, Tel Aviv.

Tsai, W. (2000). 'Social capital, social relatedness and the formation of intra organizational linkages'. Strategic Management Journal, 21, 925–939.

Tsai, W. (2001). ‘Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance’. Academy of Management Journal, 44, 996– 1004.

Tsai W. (2002). ‘Social structure of competition within a multiunit organization: coordination, competition, and intra organizational knowledge sharing’. Organ. Sci. 13(2), 179-190.

Tsai, F.-S. (2005). ‘Composite diversity, social capital, and group knowledge sharing: A case narration’. Knowledge Management Research & Practice, 3, 218-228.

Tsui, A. S., & Gutek, B. A. (1999). ‘Demographic difference in organizations: Current research and future directions’. Lanham, MD: Lexington Press.

Van Dijk, E., De Cremer, D., & Handgraaf, M. J. J. (2004). ‘Social value orientations and the strategic use of fairness in ultimatum bargaining’. Journal of Experimental Social Psychology, 40, 697–707.

Van Lange, P. A. M. (1999). ‘The pursuit of joint outcomes and equality in outcomes: An integrative model of social value orientation’. Journal of Personality and Social Psychology. 77, 337–349.

Van Lange, P. A. M., Agnew, C. R., Harinck, F., & Steemers, G. E. M. (1997). ‘From game theory to real life: How social value orientation affects willingness to sacrifice in ongoing close relationships’. Journal of Personality and Social Psychology, 73, 1330–1344.

Van Lange, P. A. M., Otten, W., De Bruin, E. M. N., & Joireman, J. A. (1997). ‘Development of prosocial, individualistic, and competitive orientations: Theory and preliminary evidence’. Journal of Personality and Social Psychology, 73, 733–746.

Van Lange, P. A. M., De Cremer, D., Van Dijk, E., & van Vugt, M. (2007). ‘Basic principles of social interaction'. In A.

Van Lange, P. A. M. and Semin-Goossens, A. (1998). ‘The boundaries of reciprocal cooperation.’ Eur. J. Soc. Psychol., 28: 847–854.

Van Knippenberg, D., De Dreu, C. K. W., and Homan, A. C. (2004). 'Work group diversity and group performance: An integrative model and research agenda'. Journal of Applied Psychology, 89 , 1008–1022.

Van Knippenberg, D., & Schippers, M. C. (2007). Work group diversity. Annual Review of Psychology, 58, 515–541.

Vardi, Y., & Weitz, E. (2004). ‘Misbehavior in Organizations: Theory, Research and Management’. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Wang, S., & Noe, R. A. (2010). ‘Knowledge sharing: A review and directions for future research’. Human Resource Management Review, 20, 115–131.

Wasko, Molly McLure, & Samer Faraj (2000). ‘It is what one does": why people participate and help others in electronic communities of practice’. Journal of Strategic Information Systems 9(1), 155-173.

Wasserman, S., & Faust, K. (1994). ‘Social network analysis: Methods and

applications'.New York: Cambridge University Press.

Wenger, Etienne C, & William M. Snyder. (1999). 'Communities of practice: The organizational frontier'. Harvard Business Review (Jan.-Feb.): 139-145.

Wu, Yeh, and Hung (2012). 'Knowledge sharing and work performance: a network perspective'. Social behavior and personality. 40(7), 1113-1120.

Wu, D. Y., Liao, Z. J., & Dai J. C. (2015). 'Knowledge heterogeneity and team knowledge sharing as moderated by internal social capital.' Social behavior and personality, 43(3), 423-436.

Yuan, Y. C., Fulk J., Monge, P. R., and Contractor N. (2010). 'Expertise Directory Development, Shared Task Interdependence, and Strength of Communication Network Ties as Multilevel Predictors of Expertise Exchange in Transactive Memory Work Groups'. Communication Research. 37(1), 20 –47.

APPENDIX

Survey items

1. Proself value

- I concentrate on achieving my own personal goals.
- I think it is important to give priority to personal interests as much as possible.
- When making a decision, I tend to trust my own judgment.

2. Prosocial value

- I concentrate on achieving my group's goals.
- I think it is important to give priority to group interests as much as possible.
- When making a decision, I take into consideration the advice of others.

3. Knowledge sharing

- I looked into the request to make sure my answers were accurate.
- I explained everything very thoroughly.
- I answered all his/her questions immediately.
- I told my coworker exactly what s/he needed to know.

4. Knowledge hiding

- Agreed to help him/her but never really intended to.
- Told him/her that I would help him/her out later but stalled as much as possible.
- Pretended that I did not know the information
- Said that I did not know, even though I did.

5. Radical creativity

- This person is a good source of highly creative ideas.
- This person demonstrates originality in his/her work.
- This person suggests radically new ways of doing things.

6. Incremental creativity

- This person uses previously existing ideas or work in an appropriate new way.
- This person is very good at adapting already existing ideas or work.
- This person easily modifies previously existing work processes to suit current needs.

7. Peer review

- (Reciprocated knowledge sharing) I share ideas, business knowledge, and information with this person.
- (Reciprocated knowledge hiding) “I pretend that I did not know the information to this person.”
- (Network position) This person occupies central positions in our team’s work-related communication.
- (Influence) This person exerts substantial influence over decisions in our team.
- (Task interdependence) I frequently must coordinate my efforts with this person.

요약 (국문초록)

지식관리 행동에 대한 동료들의 대응이 개인의 팀 위치와 창의성에 미치는 영향

서울대학교 대학원

경영학과 경영학전공

종의가 (Yichia Chung)

본 연구는 사회 교환 이론과 네트워크 이론을 기반으로 하여 조직 구성원들간의 지식관리 행동의 양상을 경험적 방법론을 통해 검증한다. 특히 본 연구에서는 조직 구성원 개인의 사회적 가치 지향성이 지식관리 행동이라는 중요한 의사결정에 미치는 영향을 검증하며, 이러한 지식관리 행동이 집단원 간의 대인 관계라는 메커니즘을 통해 개인의 집단 내 위치 및 창의적 성과에 미칠 것이라 예측한다. 팀이라는 조직 특유적 맥락의 중요성에 기반하여 본 연구에서는 팀 수준의 사회적 가치 지향성이 갖는 조절 효과 또한 경험적 데이터를 기반으로 하여 검증한다.

본 연구 모형은 대만과 한국 기업의 65 개 팀, 총 253 명의 연구 참여자들에게서 확보한 데이터로 타당화하였다. 결과에

따르면 친 사회적 지향성이 강한 직원들은 친 자기적 지향성이 강한 직원들보다 더 많은 양의 지식을 공유하였다. 개별 구성원의 지식 공유 행동은 창의적 성과에 유의한 영향을 미치지 않는 것으로 나타난 반면, 동료의 지식 공유 및 숨김 행동은 대상 직원의 팀 내 네트워크에서의 영향력 및 의사 소통 상의 위계적 위치에 영향을 미쳐 결과적으로 창의적 성과물에 영향을 미치는 것으로 나타났다. 또한, 본 연구 결과에 따르면 팀의 친사회적 가치 지향성과 개인의 친사회적 가치 지향성은 동료의 보답 행동에 유의한 상호작용 효과를 보였다.

주요어: 사회적 가치 지향성, 지식 관리 행동, 보답 행동, 처벌 행동, 네트워크 위치, 창의성, 팀 수준 사회적 가치 지향성

학 번: 2013-23802